

Environmental Assessment

for the

**Construction of Facilities in Support of the
U.S. Army Alaska's Range Improvements**

at

Eielson Air Force Base, Alaska

**354th Fighter Wing
December 2003**

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE DEC 2003		2. REPORT TYPE		3. DATES COVERED 00-00-2003 to 00-00-2003	
4. TITLE AND SUBTITLE Environmental Assessment for the Construction of Facilities in Support of the U.S. Army Alaska's Range Improvements at Eielson Air Force Base, Alaska				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) 354th Fighter Wing, 354 Broadway Street, Eielson AFB, AK, 99702				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 32	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)
and
FINDING OF NO PRACTICABLE ALTERNATIVE (FONPA)
for the
CONSTRUCTION OF FACILITIES IN SUPPORT OF THE
U.S. ARMY ALASKA'S RANGE IMPROVEMENTS**

Introduction

The U.S. Army Alaska (USARAK) is proposing to construct new and upgrade existing range facilities in support of the establishment of the new Stryker Brigade that will be assigned to Ft. Wainwright, Alaska. Some of these range facilities will require the construction of infrastructure, including an access road and power line, on Eielson Air Force Base (Eielson) property.

Description of the Proposed Action

USARAK is proposing to construct a 1,790-foot-long gravel road that would extend from Transmitter Road to the boundary of Eielson's property and the Yukon Training Area (YTA). The YTA is an Army range that is located behind Eielson and provides Ft. Wainwright personnel with training facilities. The gravel access road would follow an existing winter trail that has been used in past years by USARAK personnel and vehicles to access their winter camp located in the range. In addition to the access road, USARAK will construct a power and communication line that would extend from its takeoff point on the Eielson power grid at Manchu Road and French Creek Drive to the newly proposed Multipurpose Training Range (MPTR) sited near the Army's Winter Camp.

Alternatives to the Proposed Action

One alternative to the proposed action was identified. This alternative would use existing roads, Transmitter Road to Arctic Avenue, Arctic Avenue to Manchu Road, and Manchu Road to the YTA. This route would require the use of existing roads through a portion of base housing. A bridge where Manchu Road crosses French Creek would have to be rebuilt to adequately handle the projected level of traffic.

No Action Alternative

This alternative would result in no access road being constructed and no power line being built to the MPTR facility. This alternative would require the Army to use one of two existing access roads to reach the required portion of the YTA, resulting in significant additional travel distances.

Environmental Impacts of the Proposed Action

Wetlands and Floodplains

Wetlands would be impacted by both the construction of the road along Manchu Trail and the construction of the power and communication line along Manchu Road. The total loss of wetlands would be 2.03 acres of mixed black spruce scrub/shrub wetlands. These wetlands are of relatively low value and large tracts of similar wetland types exist adjacent to the project sites. Loss of these wetland areas would not be significant.

Biological Resources

The wetland area associated with the construction of the road provides some habitat for wildlife in the area. What will likely occur from activities such as road construction through an undisturbed area is that most, if not all, species presently utilizing the habitat will be displaced to nearby similar habitat. The placement of power poles for construction of the power and communication line will not result in any measurable impacts to wildlife use of the area.

Threatened or Endangered Species

There are no threatened or endangered species in the project area. The project area is not suitable habitat for any of the threatened or endangered species occurring in the Alaskan interior.

Historical or Cultural Resources

Most archeological sites on Eielson lands have been identified and mapped. The proposed project is not associated with any known sites. In the event that historic or cultural sites are discovered during project construction, activities will be halted and a professional archeologist will evaluate the find.

Air Quality

The proposed actions will have minor air quality impacts during construction due to fugitive dust and machinery exhaust. There may be some minor long-term impacts resulting in vehicle exhaust from Army vehicles accessing the range. Such impacts will be highly localized and temporary in nature.

Mitigation

No special conditions (mitigation) other than standard best management practices that are already incorporated into the project design, are required by any federal or state agency for impacts that may result from this project.

Public Comment


No public comment was received from the public noticing of the EA/FONSI for this project.

Findings

Pursuant to the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) implementing regulations for NEPA (40 CFR Part 1500-1508), and Air Force Instruction (AFI) 32-7061, *Environmental Impact Analysis Process* (32 CFR Part 989), the Air Force has conducted an EA for the Army's proposed construction of an access road and power line on Eielson property. This FONSI/FONPA has been developed pursuant to information provided in the accompanying EA.

Finding Of No Practicable Alternative: The USARAK is a branch of the U.S. Army with a mission to train combat forces to support military operations worldwide. The USARAK must have available for training facilities that will meet its strategic mission requirements. Taking all the environmental, economic, and other pertinent factors into account, pursuant to Executive Order 11990, the authority delegated by SAFO 780-1, and taking into consideration the submitted information, I find that there is no practicable alternative to this action and the proposed action includes all practical measures to minimize harm to the environment.

Finding Of No Significant Impact: Based on this environmental assessment, which was conducted in accordance with the requirements of NEPA, CEQ, and Air Force Instructions, I conclude construction of an access road and power line on Eielson lands by the Army will not result in significant impacts to the environment. I also find that the preparation of an environmental impact statement is not warranted.


VICTOR E. RENUART, JR.
Lieutenant General, USAF
Vice Commander, Pacific Air Forces

MAR 15 2004

Date

TABLE OF CONTENTS

FINDING OF NO SIGNIFICANT IMPACT and FINDING OF NO PRACTICABLE ALTERNATIVE	i-iii
1.0 Purpose and Need for Action	1
1.1 Background and Objectives for the Proposed Action	1
1.2 Location of the Proposed Action	1
1.3 Proposed Action	3
1.4 Alternatives to the Proposed Action	4
1.5 No Action Alternative	4
1.6 Environmental Documentation that Influences the Scope of this EA	4
1.7 Decision to be Made	4
1.8 Federal, State, and Local Permits Needed	5
2.0 Description of the Proposed Action and Alternatives	6
2.1 Proposed Action	6
2.2 Alternative to the Proposed Action	6
2.3 No Action Alternative	8
3.0 Affected Environment	9
3.1 Physical Environment	9
3.1.1 Geology	9
3.1.2 Soils	9
3.1.3 Groundwater	9
3.1.4 Surface Water	10

3.1.5 Noise	10
3.1.6 Air Quality	11
3.1.7 Cultural Resources	12
3.2 Biological Resources	12
3.2.1 Vegetation	12
3.2.2 Aquatic/Fishery Resources	13
3.2.3 Wildlife Resources	14
3.2.4 Threatened and Endangered Species	14
4.0 Environmental Consequences	15
4.1 Physical Environment	15
4.1.1 Geology and Soils	15
4.1.2 Groundwater	15
4.1.3 Surface Water	15
4.1.4 Noise	16
4.1.5 Air Quality	16
4.1.6 Cultural Resources	17
4.2 Biological Resources	17
4.2.1 Vegetation	17
4.2.2 Aquatic/Fishery Resources	17
4.2.3 Wildlife Resources	17
4.2.4 Threatened and Endangered Species	18
4.3 Cumulative Impacts	18

4.4 Unavoidable Adverse Impacts	19
4.5 Relationship of Short-Term Uses and Long-Term Productivity	19
4.6 Irreversible and Irretrievable Commitments of Resources	19
4.7 Environmental Justice	19
4.8 Mitigation	20
5.0 List of Persons and Agencies Consulted	21
6.0 Glossary	22-23
7.0 Wetlands Permit	24
8.0 Public Notice	25

1.0 Purpose and Need for the Action

Section 1.0 provides a description of the purpose and need for the proposed action and its alternatives.

1.1 Background and Objectives for the Proposed Action and Alternatives

1.1.1 In 2002, the United States Congress authorized the formation of a Stryker Brigade Combat Team within the United States Army Alaska (USARAK). Currently available range training facilities are not sufficient to provide mission essential training opportunities for this new brigade. To address the need for additional training facilities, Ft. Wainwright is planning upgrades to existing facilities and will construct several new training complexes.

1.1.2 Ft. Wainwright is a relatively small (13,756 acres) Army base that was first activated in 1940. It lies immediately adjacent to the city of Fairbanks and has little or no space on base for expansion of facilities. It is for this reason that much of the new Stryker Brigade training facilities need to be sited on Army range lands that are nearby, including the Yukon Training Area (YTA). The YTA lies approximately 20 miles southeast of Ft. Wainwright, contains 257,276 acres, and has adequate space to site the required training facilities.

1.1.3 Although there is adequate space in the YTA for siting the proposed new range facilities, two issues must be addressed for USARAK to accomplish this in the YTA. The first issue is access to the YTA lands, which at present is limited at best. The second issue is providing a source of power to operate range facilities.

1.1.4 Eielson Air Force Base (Eielson) is located immediately adjacent to the YTA on its west side. Two of the three existing access routes to the YTA are through Eielson lands. The third access route cannot be considered viable due to the excessive distance that vehicles would have to travel. An additional access route utilizes a winter only trail that crosses Eielson property. The only nearby source of electrical power in the area is also on Eielson. Therefore the only viable options that are available to the Army to meet the need for additional training facilities is to utilize Eielson's existing infrastructure (power and roads).

1.2 Location of the Proposed Action

1.2.1 Eielson is located in the Tanana River Valley on a low, relatively flat, floodplain terrace that is approximately 2 miles north of the active river channel. Other communities near Eielson include Moose Creek to the north and Salcha to the south.

1.2.2 Base lands include 19,790 contiguous acres bounded on the west by the Richardson Highway and on the north and east by Army lands (Yukon Training Area).

REGIONAL AND BASE LOCATION MAPS

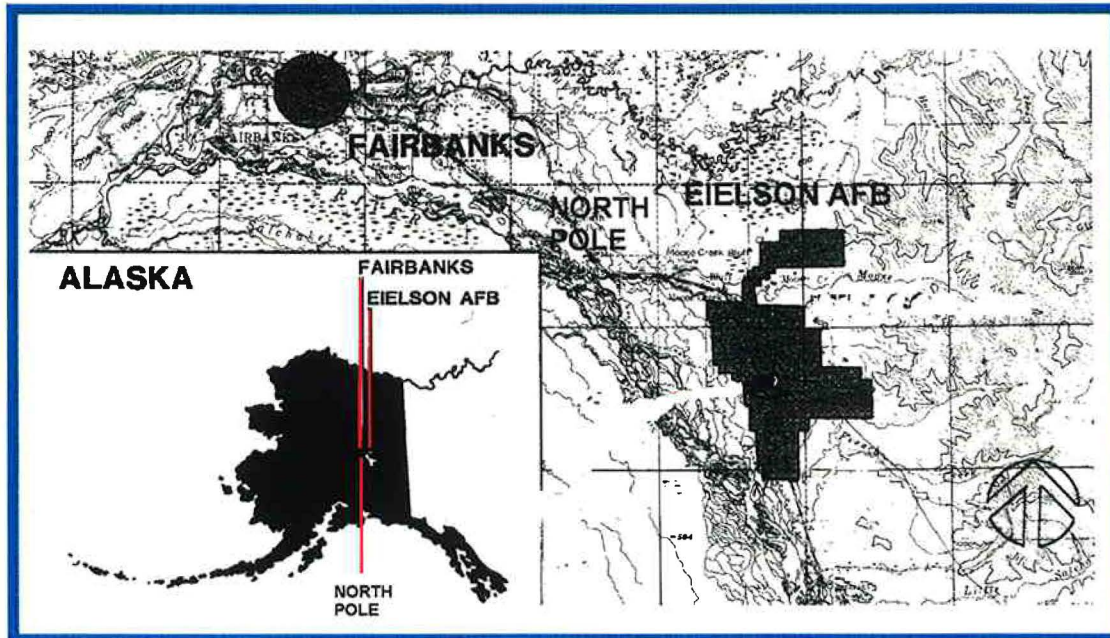


Figure 1-1 Base Location Map

To the south, the community of Salcha borders Eielson. The developed portion of Eielson is primarily an area filled by gravel to elevate potential building sites above the 100-year floodplain of nearby watersheds. In addition, more than 90 percent of the lands that constitute Eielson were at one time wetlands. Of the remaining undeveloped portions of the base, 70 percent are wetlands.

1.2.3 As a consequence of this preponderance of wetlands, land use planning and utilization of Eielson lands becomes very difficult if one is to entirely avoid siting facilities in wetlands and floodplains. This was a major consideration in USARAK's project planning process for siting and construction of the expanded training facilities.

1.2.4 In addition to having to deal with wetland issues, USARAK also had to look at existing uses of land that was available for routing and siting facilities. One of the existing road systems that could provide access to the required portions of the YTA passes through Eielson base housing. Using this route on a long-term basis would be very disruptive and present safety concerns. Figure 1-2 depicts the location of some of the range facility upgrades for which access through Eielson lands would require.

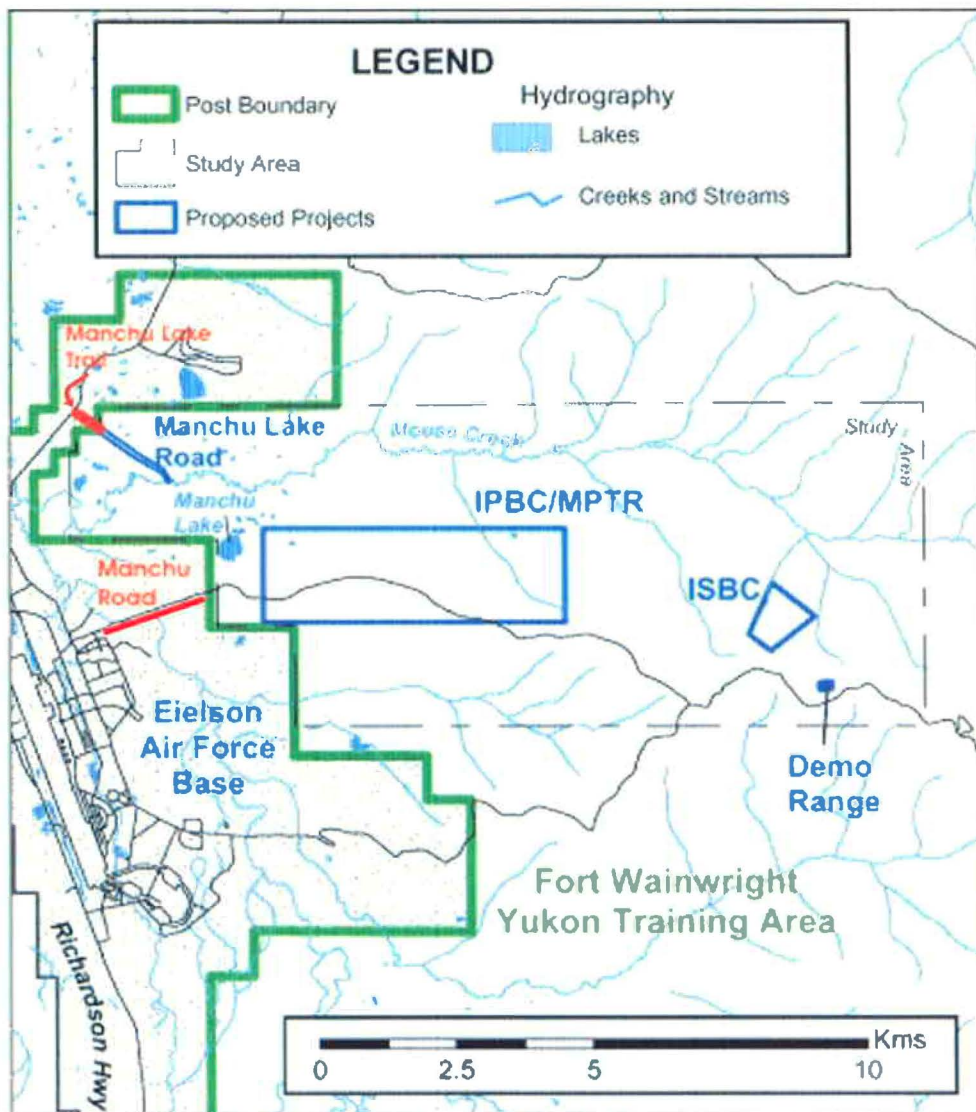


Figure 1-2 - Location of USARAK Proposed Facilities

1.3 Proposed Action

Convert Manchu Trail into an All Weather Road and Extend a Power Line From the Eielson Power Grid to the Multi Purpose Training Range (MPTR) Facility

The proposed action would result in the following activities:

- Construction of a 1,790-foot-long gravel road that would extend from Transmitter Road to the boundary of Eielson's property and the YTA. This gravel road would

follow the existing winter trail that has been used in past years by USARAK personnel and vehicles to access their winter camp.

- Construct a power and communication line that would extend from its takeoff point in the Eielson power grid at Manchu Road and French Creek Drive to the newly proposed Multipurpose Training Range (MPTR) sited near the Army's Winter Camp (see **Figure 1-2**).

1.4 Alternative to the Proposed Action

Use an Existing Road Access Through Eielson Cantonment Area and Extend Power Line from the Eielson Power Grid to the MPTR Range

This alternative would use existing roads, Transmitter Road to Arctic Avenue, Arctic Avenue to Manchu Road, and Manchu Road to the YTA. This route would require the use of existing roads through a portion of base housing. A bridge where Manchu Road crosses French Creek would have to be rebuilt to adequately handle the projected level of traffic. The routing of the power and communication line would be similar to the proposed action.

1.5 No Action Alternative

This alternative would result no additional access roads being built to that portion of the YTA where the MPTR would be located. This would leave as the only options for access to the area using Johnson Road into the YTA (28 miles) or going through the south end of Eielson and using Quarry Road into the YTA (12 miles).

1.6 Environmental Documentation that Influences the Scope of this Environmental Assessment

1.6.1 *Environmental Assessment and Finding Of No Significant Impact for Range Upgrade/Expansion Projects, Fort Wainwright, Alaska (2003)*. This EA was written to address the proposed new range projects that would be needed to support the new Stryker Brigade, including the MPTR facility that requires road access through Eielson.

1.6.2 *Alaska Army Lands Withdrawal Renewal, Final Legislative Environmental Impact Statement (EIS), 1999*. This EIS addressed the use of lands withdrawn from public use for the purpose of military training activities. The use of the YTA is covered in detail.

1.7 Decision to be Made

1.7.1 As required by 32 CFR Part 989, the *Environmental Impact Analysis Process* will be used to determine what are the environmental consequences of the proposed construction of an access road and power line to the Army's MPTR facility in the YTA.

This EA is intended to satisfy these requirements. The proposed action and all action alternatives listed in Sections 1.3, as well as the no action alternative, will be addressed in detail in Chapter 2.0 of this document. A description of the resources associated with the areas affected by all alternatives will be provided in Chapter 3.0 and the impacts that could result from each one are discussed in Chapter 4.0.

1.7.2 Based on the evaluation of impacts in the EA, a Finding Of No Significant Impact (FONSI) will be published if there is a finding of no significant environmental impacts for the proposed action. If it is determined that the proposed action will have significant environmental impacts, other alternatives will be considered for which impacts may not reach the threshold of significance.

1.7.3 The EA, a draft FONSI (if applicable), and all other appropriate planning documents will be provided to the Pacific Air Forces (PACAF) Vice Commander, the decision maker, for review and consideration. If, based on a review by the decision maker of all pertinent information, a FONSI is proposed, a notice of intent (NOI) will be published in accordance with 40 CFR 1506.6. All interested parties will have 30 days to comment on the decision to the Air Force. If, at the end of the 30-day public comment period, no substantive comments are received, the decision maker will sign the FONSI.

1.7.4 An Executive Order (EO), 11988, requires the heads of federal agencies to find that there is no practicable alternative before the agency takes certain actions impacting wetlands. The proposed action would impact wetland resources. To address this requirement, the Secretary of the Air Force's designated agent, HQ PACAF/CV will sign a document that addresses the issues of wetlands that may be associated with actions the Army proposes to take. This document, known as a FONPA, will state which alternative, the proposed action, alternative 1, or the no action alternative, will be selected as the appropriate course of action. The FONPA will be combined with the FONSI into one document. It will contain documentation that there are no practicable measures to minimize harm to wetlands, and that all appropriate mitigation will be incorporated into the project design or otherwise authorized.

1.8 Federal, State, and Local Permits Needed for Project Implementation. Actions identified in this EA would require that certain permits be obtained. The Proposed Action requires an Army Corps of Engineers 404 wetlands permit.

2.0 Description of the Proposed Action and Alternatives

Chapter 2.0 provides a description of alternatives considered for the purpose and need described in Chapter 1.0. The proposed action, one action alternative, and a no action alternative are addressed.

2.1 Proposed Action

Convert Manchu Trail into an All Weather Road and Extend a Power Line From the Eielson Power Grid to the MPTR Range

2.1.1 The proposed action would result in the construction of a 1,790-foot-long road that would extend from Transmitter Road to the Army's YTA boundary (see **Figure 2-1**). This road would be 28-foot-wide at its crown, 36-foot-wide toe to toe, and a 4-foot-thick gravel road bed. It would require the filling of 1.6 acres of mixed black spruce scrub/shrub and wetlands with approximately 9,500 cubic yards of gravel. The proposed route follows an existing winter trail that is used during the winter when soils and open water areas are frozen.

2.1.2 Gravel material for the construction of the project would be obtained from Cathers Lake gravel pit, a gravel source developed by Eielson for construction material. The pit is approximately 2 miles away from the project site off of Transmitter Road.

2.1.3 The proposed project would also include the construction of a 2.2-mile-long power and communications line along Manchu Road from where it would connect to the Eielson power grid in the base housing area. This single pole design power line would require the filling of 0.43 acres of black spruce scrub/shrub wetlands. The poles would closely follow the Manchu Road corridor to its destination at the Army's winter camp in the YTA.

2.1.4 Construction of the road and power line would be accomplished during the summer season. Road construction would start at the Transmitter Road end of the project and work towards the YTA where it would ultimately connect with the existing Manchu Lake road.

2.2 Alternative to the Proposed Action

Use an Existing Road Access Through Eielson Cantonment Area and Extend a Power Line from the Eielson Power Grid to the MPTR Facility

2.2.1 The only feasible alternative available to accomplish the objectives of the purpose and need of this project would be to utilize existing road systems to access the Winter Camp portion of the YTA. Of the existing routes available, only one would be feasible due to the excessive length of the other two existing routes. This route would utilize

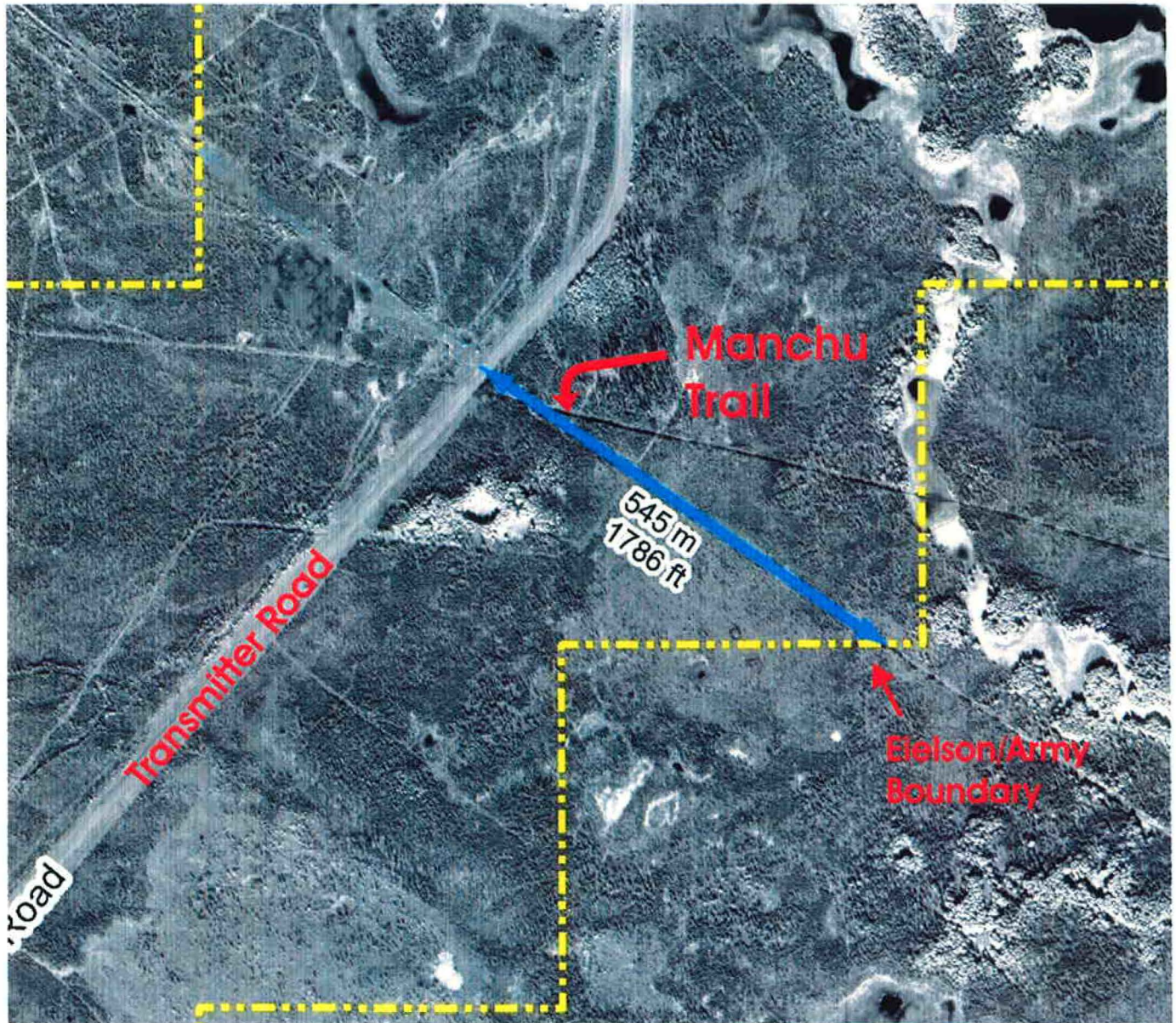


Figure 2-1 - Proposed Road Location Along Manchu Trail

Transmitter Road to Arctic Avenue, Arctic Avenue to Manchu Road, and Manchu Road to the proposed MPTR site. This route does traverse a small portion of Eielson base housing (see **Figure 2-2**).

2.2.2 This alternate route crosses French Creek. The existing bridge at this location would need to be upgraded to handle the proposed traffic that would transit to the MPTR range once it is operational.

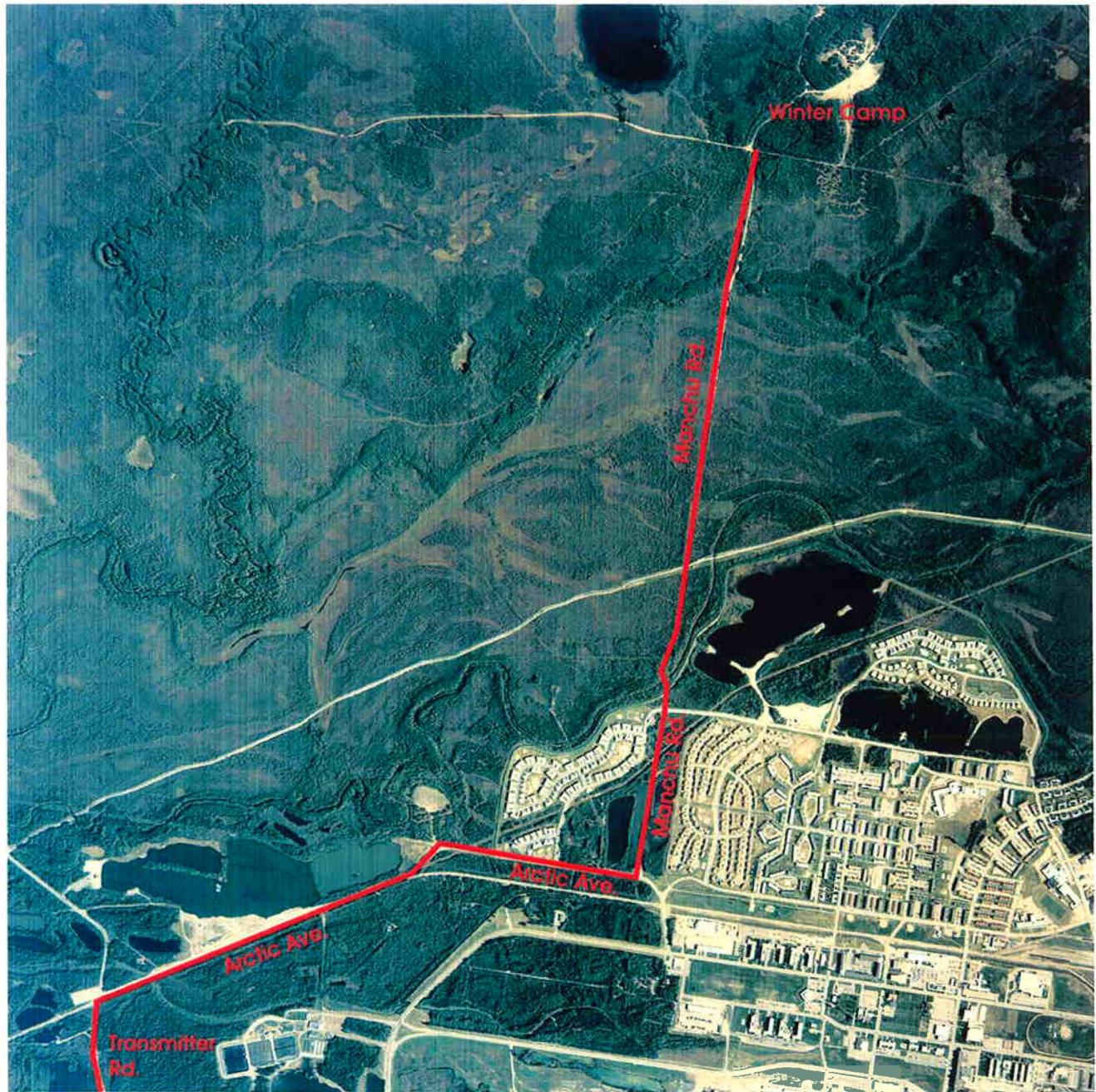


Figure 2-2 - Alternative 1 Access Route Through Base

2.3 No Action Alternative

Under this alternative no access road would be built along Manchu Trail and a route through Eielson's main base would not be available for use to access the proposed new MPTR facility. In addition no power to this facility would be made available. Other sources of power would have to be considered.

3.0 Affected Environment

This section describes relevant resource components of the existing environment that might be impacted by the proposed project and its alternatives. Only environmental components relevant to the issues and objectives of this EA are described.

3.1 Physical Environment

Eielson encompasses approximately 19,790 acres and is isolated from major urban areas. The portion of Eielson that contains the project areas associated with the Proposed Action and Alternative 1 lies on the abandoned floodplain of the Tanana River, with elevations ranging from 525 to 550 feet above Mean Sea Level (MSL). The surface of the floodplain is relatively smooth and slopes gently downward to the northwest at a gradient of about 6 feet per mile

3.1.1 Geology

The area in the vicinity of Eielson was not glaciated during the last ice age. The majority of the subsurface geologic formations of the central plateau of Alaska are primarily from the Permian and Devonian periods of the Paleozoic era. The hills to the northeast of the base are composed of Precambrian and Paleozoic-age schists, micaceous quartzites, and subordinate phyllite and marble. These formations have been locally intruded by a series of Cretaceous lower tertiary intrusions.

3.1.2 Soils

Soils in the Tanana River Valley consist of unconsolidated silty sands and gravels, organic and sandy silts, and clays. Floodplain soils nearest the active channels are sandy with a thin silt loam layer on the surface. On higher terraces, the soils become predominately silt from the Salchaket series. Along older river terraces, silt loam soils, which contain significant organic components, often dominate. These soils tend to be cold and wet and are generally underlain by permafrost. Approximately two-thirds of Eielson is covered with soils containing discontinuous permafrost. This preponderance of permafrost soils contributes to the large percentage of vegetated wetlands occurring on undeveloped base lands.

3.1.3 Groundwater

Eielson is located over a shallow unconfined aquifer. The aquifer is approximately 250 feet thick, extends to bedrock, and has a regional gradient of about 5 feet per mile flowing to the north-northwest. The water table varies from the surface in adjacent wetlands to 10 feet below ground level in developed areas. The base uses the local aquifer for its drinking water and monitors groundwater quality in a number of locations as part of its Installation Restoration Program. Localized contamination of the aquifer

has been identified in the industrial area of the base, but the overall quality of groundwater at Eielson is good.

3.1.4 Surface Water

3.1.4.1 Aquatic bodies on Eielson include streams, wetlands, and lakes. There are approximately 28 miles of streams; 10,133 acres of wetlands; 12 lakes (Lilly Lake is natural and the remaining 11 are man-made); 80 ponds (10 naturally-occurring and 70 man-made) totaling 560 acres; and 6,770 acres of floodplains on the main base. The man-made lakes and ponds were created during the excavation of gravel deposits for use as fill material for construction projects on base. Surface drainage on Eielson is generally in a north-northwest direction and parallel to the Tanana River. Five streams flow through the base and discharge into the Tanana River via Piledriver Slough.

3.1.4.2 Approximately 51 percent, or 10,133 acres, of Eielson is classified as wetlands, with 9,391 acres being vegetated wetlands and the remainder being lakes, ponds, and streams. Wetlands and low gradient alluvial streams comprise most of the surface water resources on Eielson, with wetlands dominating the low-lying areas within and surrounding the installation. Most wetland areas were created as a result of surface waters becoming trapped in the thawed layer over the permanently frozen subsurface (permafrost). Flood periods tend to occur during spring snowmelt and during the middle to late summer, when heavy rains or warm air quickly brings glacier fed mountain streams to flood capacity. Several lakes and extensive wetlands surround the airfield in the cantonment area. Among these are Bear, Polaris, Moose, Hidden, Pike, Rainbow, Scout, Grayling, and Tar Kettle lakes. Creeks that can be found in the vicinity of the airfield include French and Moose creeks.

3.1.4.3 Piledriver and Garrison sloughs are the two largest streams in the vicinity of the airfield. Piledriver Slough, which discharges into the Tanana River, is located along the western edge of Eielson and approximately 4,000 feet west of the airfield and parallel to the runways. Approximately 12 miles of Piledriver Slough occurs on Eielson. The slough receives no runoff from the urban developed area of the base and has good water quality.

3.1.5 Noise

Aircraft generate by far the most noise on Eielson. Noise levels associated with aircraft during flying hours can exceed 80 decibels (dB) in the vicinity of the flight line; however, the decibel level drops off to a maximum of 70-dB in the closest residential area, Moose Creek, just north of the base. A 65-dB level is not recommended for housing areas by EPA standards (Noise Effects Handbook, US EPA, 1981). Construction noise is potentially another source of noise, but it is not considered to be a concern due to its temporary nature and relatively low dB level. **Figure 3-1** is a chart that provides a scale of noise levels associated with typical daily activities.

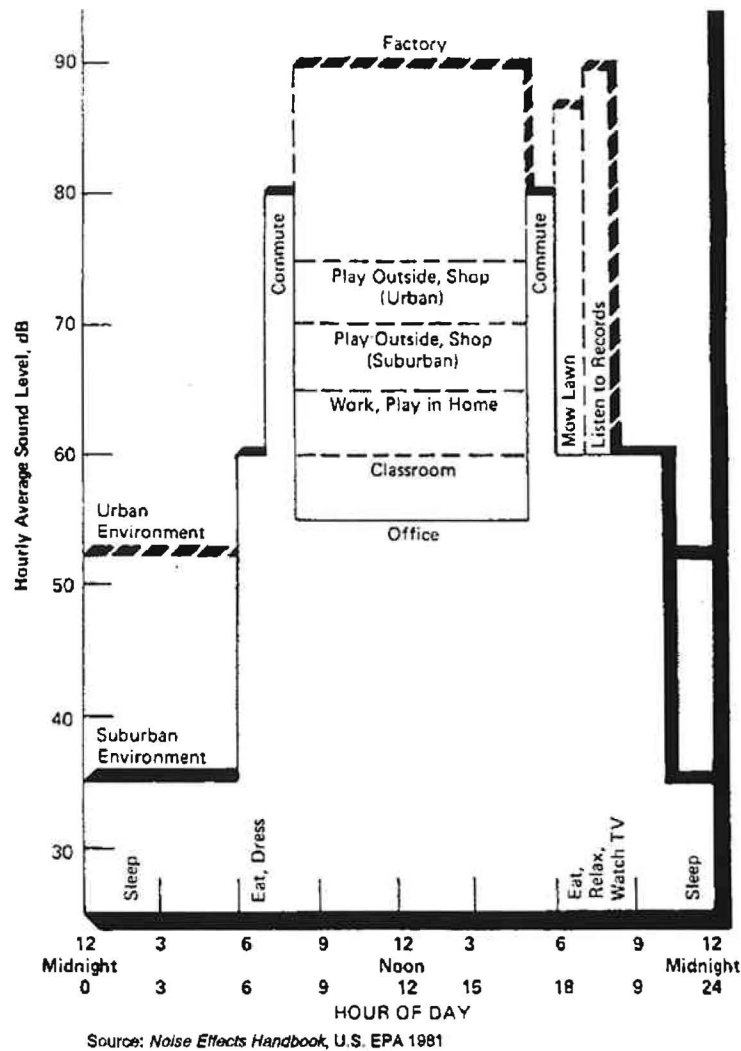


Figure 3-1 - Noise Levels

3.1.6 Air Quality

Air quality is generally good at Eielson. Although portions of the North Star Borough, of which Eielson is also a part, are in non-attainment for carbon monoxide (Fairbanks and North Pole), Eielson is far enough south to not be included or affected. The Clean Air Act designates areas as *attainment*, *non-attainment*, *maintenance*, or *unclassified* with respect to their compliance with National Ambient Air Quality Standards (NAAQS). Non-attainment and maintenance areas are locales that have recently violated one or more of the NAAQS and must satisfy the requirements of State or Federal Implementation Plans (SIPs or FIPs) to bring them back into conformity with the applicable air quality standards. Eielson is located in an *unclassified* area, and therefore activities that generate emissions do not need to satisfy the requirements of

the EPA ruling *Determining Conformity of General Federal Actions to the State or Federal Implementation Plans*.

3.1.7 Cultural Resources

In 1994, Eielson contracted for the preparation of a predictive model for the discovery of prehistoric cultural resources on base lands. The predictive model was then used to conduct an evaluation of cultural resources on Eielson as required by Section 110 of the National Historic Preservation Act. The areas associated with the proposed action and Alternative 1 have been determined to not contain cultural or archeological resources. In the event that during project excavation/construction any cultural resources were encountered, activities would cease until the resources were evaluated.

3.2 Biological Resources

3.2.1 Vegetation

3.2.1.1 The vegetation of the Tanana River Valley in the vicinity of Eielson is typical of boreal forest or taiga habitats. The boreal forests of Eielson are predominantly evergreen forests dominated by black spruce and white spruce (*Picea glauca*), but also include extensive stands of deciduous forests containing paper birch (*Betula papyrifera*), quaking aspen (*Populus tremuloides*), and balsam poplar (*P. balsamifera*). Extensive areas of shrub and herbaceous vegetation are found in wetlands, lowland areas, and the active floodplain, and are dominated by willows and other shrubs, sedges, and grasses. Bog areas are dominated by black spruce stands intermixed with peat moss (*Sphagnum* spp.) and cottongrass (*Eriophorum vaginatum*).

3.2.1.2 In the immediate project area, the black spruce trees are small to medium sized and vary greatly in density (see **Figure 3-1**). Black spruce stands are interspersed with small amounts of paper birch and tamarack as well as open areas dominated by scrub/shrub stands of dwarf arctic birch and bog rosemary. Understory in most areas includes Labrador tea, lowbush cranberry, and blueberry. Red squirrels use the spruce cones for food and mosses for nests. Marten use the spruce for cover. Spruce grouse use the cranberries in the fall and spruce needles in the winter for food. Black bear forage on freshly sprouted grasses in the spring and lowbush cranberries in the late summer and fall. Because of the lack of browse in black spruce wetlands, moose are in the area only when passing from one food or shelter source to another.

3.2.1.3 Occasionally the black spruce wetlands are interspersed with wet meadows that support emergent aquatic vegetation (sedges, grasses) in conjunction with seasonally persistent shallow open water areas. This habitat is used in spring and fall by migrating waterfowl and shorebirds for resting and feeding, and for nesting by resident birds on water bodies that have stable water levels. Moose forage on the grasses associated with the ponds.



Figure 3-1 - Wetland Vegetation at the Project Site

3.2.2 Aquatic/Fishery Resources

3.2.2.1 Lakes and streams on Eielson contain both native fish and fish stocked by the Alaska Department of Fish and Game. Native fish found in the Tanana River drainage include chinook salmon (*Oncorhynchus tshawytscha*), chum salmon (*O. keta*), silver salmon (*Oncorhynchus kisutch*), burbot (*Lota lota*), arctic grayling (*Thymallus arcticus*), northern pike (*Esox lucius*), chub (*Semotilus* spp.), several species of whitefish (*Coregonus* spp.), sheefish (*Stenodus leucichthys nelma*), rainbow trout (*Oncorhynchus mykiss*), and arctic char (*Salvelinus alpinus*).

3.2.2.2 The Alaska Department of Fish and Game stocks five lakes and one stream on Eielson: Grayling Lake, Hidden Lake, Polaris Lake, 28 Mile Pit, Moose Lake, and Piledriver Slough. Fish stocked by the Alaska Department of Fish and Game includes rainbow trout, arctic grayling, arctic char, silver salmon, chinook salmon, chum salmon, and northern pike. There are no known federally listed threatened or endangered fish species, fish species proposed for listing, or critical fish habitats on Eielson.

3.2.2.3 In the immediate vicinity of the project area there are no aquatic resources that could be impacted by this project.

3.2.3 Wildlife Resources

3.2.3.1 The surrounding Tanana Valley provides breeding habitat for a wide variety of migratory bird species. Bird species found on Eielson include spruce grouse (*Dendragapus canadensis*), ruffed grouse (*Bonasa umbellus*), northern goshawk (*Accipiter gentilis*), sharp-shinned hawk (*A. striatus*), great horned owl (*Bubo virginianus*), red-tailed hawk (*Buteo jamaicensis*), and American kestrel (*Falco sparverius*). During winter, willow ptarmigan (*Lagopus lagopus*) and rock ptarmigan (*L. mutus*) are common on Eielson. Over 20 species of waterfowl, including geese, ducks, loons, grebes, and scoters use aquatic habitats on the installation.

3.2.3.2 There are 32 species of mammals found on Eielson. Common species include moose (*Alces alces*), black bear (*Ursus americanus*), grizzly bear (*U. arctos*), snowshoe hare (*Lepus americanus*), marten (*Martes americana*), red squirrel (*Tamiasciurus hudsonicus*), beaver (*Castor canadensis*), muskrat (*Ondatra zibethicus*), mink (*Mustela vison*), meadow vole (*Microtus pennsylvanicus*), red-back vole (*Clethrionomys rutilus*), and meadow jumping mice (*Zapus hudsonius*).

3.2.4 Threatened and Endangered Species

No threatened or endangered species, as designated by the US Fish and Wildlife Service, typically occur in any of the project areas included in the two action alternatives. This was the conclusion of an Eielson contract study entitled *Biological Survey, Final Report 1994*, that addressed the potential for the presence of endangered species on base lands. Recent surveys and observations continue to support this likelihood.

4.0 Environmental Consequences

This section discusses the probable impacts for each alternative described in Section 2.0. This section is organized according to resources and a discussion of each alternative action is provided relative to resources identified as relevant in Section 3.

4.1 Physical Environment

4.1.1 Geology/Soils

4.1.1.1 Proposed Action: Construction of the project at the proposed location would alter the physical environment mainly by the placement of gravel fill in approximately 1.6 acres of undisturbed mixed black spruce scrub/shrub wetlands. The overall affect of this placement of gravel on the physical environment would be to raise the elevation of the ground approximately 4 feet. This would also alter the existing soils profile wherever the gravel was placed. In addition, another 0.43 acres of similar wetlands type would be impacted by the placement of power line poles along Manchu Road.

4.1.1.2 Alternative 1: Use of the existing road systems to access the Winter Camp area of the YTA would not have any impact on soils in the area. Construction of the power line as part of this alternative would have the same impacts to soils as the proposed action.

4.1.1.3 No Action Alternative: No impacts to the physical environment would result from the use of either Johnson Road or Quarry Road to access the Winter Camp area of the YTA.

4.1.2 Groundwater

4.1.2.1 Proposed Action: Placement of gravel on the surface of 1.6 acres of black spruce wetlands would have no impact on groundwater. No excavation of soils is proposed and groundwater is at least 4 feet deep in this area.

4.1.2.2 Alternative 1: No impacts to groundwater would result from this alternative action.

4.1.2.3 No Action Alternative: No impacts to groundwater would occur if no additional access roads were constructed.

4.1.3 Surface Water

4.1.3.1 Proposed Action: Although the 1.6 acres that would be filled with gravel is black spruce wetlands, it is not anticipated that significant impacts to surface water would occur from this project. The surface water hydrology associated with these

wetlands would be maintained through culverting of the road. If ponding were to occur, additional culverts could be installed in subsequent years.

4.1.3.2 *Alternative 1:* No surface water would be impacted by this action.

4.1.3.3 *No Action Alternative:* No surface water would be impacted by the use of alternate existing access roads.

4.1.4 Noise

4.1.4.1 *Proposed Action:* Noise impacts associated with implementation of this action would be short-term and relatively low decibel compared to ambient noise levels that occur with flight line aircraft operations. Noise would be associated with construction machinery, and would last only for a few months during the construction of the road and the power line. Noise impacts would likely occur intermittently as long as the Army brought vehicles into the range for training. There are no population centers along the route, so these impacts would be minimal.

4.1.4.2 *Alternative 1:* Noise impacts would likely occur in association with the movement of equipment and Army personnel that would traverse the portions of the populated area of the base. This noise would be year-round.

4.1.4.3 *No Action Alternative:* There would likely be noise impacts along whichever existing route was selected for transport. There are no population centers along these routes, so it is unlikely that the impacts would be significant.

4.1.5 Air Quality

4.1.5.1 *Proposed Action:* Some minor, short-term impacts from emissions would occur with the operation of construction machinery during the construction phase of the project. Once built, Army vehicles would use the road regularly and these would cause additional emissions. They would, however, be short-term in nature and not significant.

4.1.5.2 *Alternative 1:* Impacts from this alternative would be mainly from the sustained Army traffic that would need to access the MPTR facility.

4.1.5.3 *No Action Alternative:* Impacts to air quality similar to Alternative 1 would likely result from this alternative. These would be in the vicinity of whichever existing route the Army chose to use.

4.1.6 Cultural Resources

No impacts to cultural resources would result from any identified alternatives. In the event that during construction of the facility, cultural resources were discovered, all activities would cease until a cultural resource specialist evaluated the find.

4.2 Biological Resources

4.2.1 Vegetation

4.2.1.1 Proposed Action: Impacts to vegetation from the proposed action would result in the total loss of 1.6 acres of mixed black spruce scrub/shrub wetlands. Additional losses of vegetation along Manchu Road would result from the installation of the power line.

4.2.1.2 Alternative 1: Impacts to vegetation would result only from the installation of the power line.

4.2.1.3 No Action Alternative: No impacts to vegetation would result from this alternative.

4.2.2 Aquatic/Fishery Resources

Despite the fact that the proposed project site is in wetlands, no impacts to aquatic or fishery resources would likely result from its construction. The nearest water body is French Creek and is approximately 500 feet to the east of the proposed project site. None of the other alternatives would result in impacts to aquatic/fishery resources if implemented.

4.2.3 Wildlife Resources

4.2.3.1 Proposed Action: The proposed action would result in the loss of 2.03 acres of wildlife habitat. The habitat, mixed black spruce scrub/shrub wetlands, would be covered by a gravel road resulting in the total loss of habitat value for this acreage. The loss would be partially mitigated by the proximity of comparable habitat that is immediately adjacent to the project area. These adjoining expanses of similar habitat would likely provide alternative habitat for species displaced by the loss of habitat at the project site.

4.2.3.2 Alternative 1: Only minor impacts to wildlife resources would occur from this alternative and would result from the installation of the power line along Manchu Road.

4.2.3.3 No Action Alternative: No impacts to wildlife resources would result from this alternative.

4.2.4 Threatened and Endangered Species

No impacts to threatened and endangered species will result from any of the alternatives considered in this EA.

4.3 Cumulative Impacts

The National Environmental Policy Act (NEPA) process requires that the issue of cumulative impacts be addressed in an environmental assessment.

4.3.1 The Council on Environmental Quality (CEQ) has stated in their NEPA regulations (1508.7) that: "*Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to past, present, and reasonably foreseeable future actions. . .*" and "*. . . can result from individually minor, but collectively significant actions taking place over a period of time.*" Eielson AFB has, over the years, been very cognizant of the issue of cumulative impacts to wetlands. This is due to the fact that the base was, to a large extent, built by filling wetlands, and that expansion of Eielson facilities beyond the original footprint of the base often requires the use of additional wetlands. Of the 19,789 acres that constitute Eielson AFB lands, 51 percent are designated wetlands.

4.3.2 To address the potential for cumulative impacts to wetlands, Eielson has developed an active program of wetland habitat creation and enhancement. Classification of Eielson wetlands according to type and quality (as defined in Cowardin, et al, US Fish and Wildlife Service, 1979) has indicated that 93 percent of Eielson AFB wetlands are of low-quality. Most of these wetlands are classified as black spruce or alder/willow, scrub/shrub wetlands and constitute large, homogenous blocks of land that provide minimal wetland values to wildlife. When Eielson develops a gravel source by excavating alluvial gravel deposits, it is in these black spruce wetlands. As part of the extraction process, wetlands of higher value are created (lake habitat with shallow littoral zones and emergent vegetation) from lower value black spruce and uplands. The type and quality of wetlands are particularly valuable for feeding, nesting, and brood-rearing by waterfowl, the bird species potentially most affected by the proposed project. The wetland creation/enhancement program on Eielson has been going on for several years and has the full and enthusiastic support of local, state, and federal resource agencies. In addition, resource agencies have viewed this voluntary wetlands enhancement program as more than adequate to compensate for losses that occur as part of Eielson construction projects.

4.3.3 The Proposed Project will result in the loss of 2.03 acres mixed black spruce bog wetlands. As a result of wetland enhancement projects described above, more than 150 acres of higher value habitat has been or will be developed at Mullins Pit and Cathers Lake, more than compensating for wetland losses incurred by base development projects. It is felt that Eielson's comprehensive wetland management

program more than offsets wetland losses and that there is a cumulative net gain in wetland values on base lands.

4.4 Unavoidable Adverse Impacts

Unavoidable adverse impacts would only result from implementation of the Proposed Action. They would include the permanent loss of 2.03 acres of mixed black spruce bog wetlands.

4.5 Relationship of Short-Term Uses and Long-Term Productivity

Short-term uses are those that generally occur on a year-to-year or shorter term basis. The Proposed Action would result in both short-term losses and long-term losses. The construction of the storage pad would result in long-term losses associated with the filling of 1.6 acres of black spruce wetlands to construct a road and 0.43 acres to construct a power line. The long-term productivity of these areas would be lost until the facilities were no longer used and the areas restored to their prior condition.

4.6 Irreversible and Irretrievable Commitments of Resources

The Proposed Action is the only action considered in this EA that would result in irreversible and irretrievable commitments of resources. The resources lost would include 2.03 acres of black spruce wetlands.

4.7 Environmental Justice

4.7.1 President Clinton issued Executive Order (EO) 12898, *Environmental Justice in Minority Populations and Low-Income Populations*, on February 11, 1994. Objectives of the EO, as it pertains to the NEPA process, requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. To accomplish these requirements the Air Force must conduct an environmental justice analysis of all potential impacts that may result from the proposed actions.

4.7.2 The environmental justice analysis must first identify all adverse impacts associated with the project. The next phase is to delineate the potential area of impact for the resources affected. If, within this area of impact, population demographics are such that a disproportionate effect on minority or low-income populations may occur, it should be so identified. These impacts should be documented and mitigation should be developed that can be implemented by the Air Force.

4.7.3 The site for the Proposed Project is not in the vicinity of any population centers and would not have any disproportionate impact on any segment of the population.

Alternative 1 would potentially impact a portion of Eielson base housing. The area impacted is in the vicinity of housing for enlisted members, including noncommissioned officers, and would impact all members, regardless of rank, equally. Based on the environmental impacts identified in this EA and on a corresponding environmental justice analysis, it is felt that no disproportionate impact to minority or low-income populations would occur from implementation of this project.

4.8 Mitigation

No mitigation is required as a result of federal and state permits obtained for this project. The only special conditions listed on the issued wetlands permit reflect best management practices that are already incorporated in the proposed design of the project.

5.0 List of Persons and Agencies Consulted

Mr. Douglas Johnson, Environmental Chief, Department of Public Works, Ft. Richardson, AK, ph: 384-3093.

Mr. Chris Campbell, US Army Corps of Engineers, Project Manager, Ft. Richardson, AK, ph: 753-5797.

Ms. Sheila Newman, US Army Corps of Engineers, Regulatory Functions Branch, Fairbanks, AK, ph: 474-2166.

Mr. Jeff Putnam, USAF, 354 CES/CEC, Eielson AFB, AK, ph: 377-51599.

6.0 Glossary

Alluvial - Sediment deposited by flowing water.

Carbon Monoxide - A colorless, odorless gas resulting from the incomplete oxidation of carbon; found, for example, in automobile exhaust or mining operations; poisonous to animals.

Cantonment - The main operational area of a military base.

Culvert - A drain crossing under a road or an embankment.

Environmental Impact Analysis Process (EIAP) - is a set of guidelines (Air Force Instruction 32-7061) that the Air Force uses to comply with the NEPA process.

Decibel - A unit of measurement for describing sound intensity.

Executive Order 11990 - Mandate to federal agencies to follow the NEPA process to ensure the protection of wetlands.

Habitat - The area or environment in which an organism or ecological community normally occurs.

Hydro-axed - A large axing machine driven by hydraulics that cuts down and mulches shrubs and trees.

Mean Sea Level (MSL) - The average surface level for all stages of the tide over a 19-year period, usually determined from hourly height readings from a fixed reference point.

National Environmental Policy Act (NEPA) - Legislation enacted in 1969 mandating that all federal agencies assess the environmental impacts of actions which may have an impact on man's environment.

National Historic Preservation Act - Federal mandate that requires the preservation of prehistoric and historic sites.

Non-Attainment Area - An area exceeding National Ambient Air Quality Standards for one or more criteria pollutants.

Permafrost - Permanently frozen subsoil occurring in perennially frigid areas.

Riparian - Living or located on a riverbank or a natural course of water.

SAFO 780-1 - Secretary of the Air Force Order and reference number.

Seasonally Persistent - Persistence is based on historical records and field evidence that indicates an area is seasonally inundated with water during non-frozen (spring/summer) portions of the year.

Turbidity - Cloudy or hazy appearance in a naturally clear liquid caused by a suspension of colloidal liquid droplets or fine solids.

Understory - A foliage layer occurring beneath and shaded by the main canopy of a forest.

Upland - An area of land of higher elevation, often used as the opposite of a wetland.

Wetlands - Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

404 Wetland - Wetland areas that have been determined "waters of the United States" and thus subject to Section 404 wetland permitting guidelines administered by the Army Corps of Engineers and the US Environmental Protection Agency.

Wetland Functional Value - A methodology that identifies the type, quantity, and quality of an ecosystem, and uses or potential uses of wetlands in the vicinity of a proposed project.

100-Year Floodplain - Based on historical evidence, there is a high probability that the area within the 100-year floodplain will be flooded once every 100 years.

8.0 Project Wetlands Permit

8.0 Public Notice

USAF ANNOUNCES an ENVIRONMENTAL ASSESSMENT

In accordance with the National Environmental Policy Act (NEPA), and Air Force Regulations, Eielson Air Force Base has completed an environmental assessment (EA) and Finding of No Significant Impact (FONSI) to evaluate the consequences of the following proposed action by the United States Army Alaska on Air Force lands:

Construct a 1,790-foot-long road along an existing winter trail to provide access to a new Multipurpose Training Area that will be constructed in the Army's Yukon Training Area. In addition, a power line would be extended from Eielson's power grid along Manchu Road to provide power to the new facility. The project will result in the filling and alteration of 2.03 acres of black spruce wetlands.

PUBLIC COMMENT WELCOME

To review the draft EA and FONSI, copies are available at the Noel Wien Library in Fairbanks. The public is invited to review these documents and make comments during the 30-day comment period from now until January 24, 2004. To get a copy of the EA, to comment, or for more information contact Maj. Valerie Trefts, 354 FW/Public Affairs, at (907) 377-2116, 354 Broadway Ave., Unit 15A, Eielson AFB, AK 99702-1830.